

**From:** Suplee, Mike  
**To:** [Laidlaw, Tina](#)  
**Subject:** got message  
**Date:** Thursday, November 14, 2013 5:09:32 PM  
**Attachments:** [Subchapter2\\_mods.docx](#)  
[Subchapter5\\_mods.docx](#)

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Hi Tina;

Got your message, we can discuss further manana.

Attached are the rule changes we sent to our rule writer today that pertain to mixing zones and a small internal reference change....cant remember if I sent these to you or not.

Mike



## Subchapter 2

## Water Quality Permit and Authorization Fees

17.30.201 PERMIT APPLICATION, DEGRADATION AUTHORIZATION, AND ANNUAL PERMIT FEES (1) The purpose of this rule is to provide fee schedules for use in determining fees to be paid to the department under 75-5-516, MCA. The types of fees provided under this rule are:

- (a) application fees for individual permits (Schedule I.A);
- (b) application fees for non-storm water general permits (Schedule 1.B);
- (c) application fees for storm water general permits (Schedule 1.C);
- (d) application fees for other activities (Schedule 1.D);
- (e) degradation authorization fees (Schedule II);
- (f) annual fees for individual permits (Schedule III.A);
- (g) annual fees for non-storm water permits (Schedule III.B); and
- (h) annual fees for storm water general permits (Schedule III.C).

(2) For purposes of this rule, the definitions contained in ARM Title 17, chapter 30, subchapter 10 and subchapter 13 are incorporated by reference. The following definitions also apply in this rule:

- (a) "domestic waste" means wastewater from bathrooms, kitchens, and laundry;
- (b) "flow rate" means the maximum flow during a 24-hour period, expressed in gallons per day (gpd);
- (c) "industrial waste," as defined in 75-5-103, MCA, means a waste substance from the process of business or industry or from the development of any natural resource, together with any sewage that may be present;
- (d) "major permit" means a Montana pollutant discharge elimination system permit for a facility that is designated by the department as a major facility pursuant to ARM Title 17, chapter 30, subchapter 13;
- (e) "minor permit" means a Montana pollutant discharge elimination system permit for a facility that is not designated by the department as major pursuant to ARM Title 17, chapter 30, subchapter 13;
- (f) "multi-county," for pesticide permit fee purposes, means the general permit authorizing pesticide application within multiple contiguous counties, not to exceed 20, as identified by the applicant;
- (g) "municipal separate storm sewer system" means a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains, that discharges to surface waters and is owned or operated by the state of Montana, a governmental subdivision of the state, a district, association, or other public body created by or pursuant to Montana law, including special districts such as sewer districts, flood control districts, drainage districts and similar entities, and designated and approved management agencies under section 208 of the federal Clean Water Act, which has jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, and is:



- (i) designed or used for collecting or conveying storm water;
- (ii) not a combined sewer; and
- (iii) not part of a publicly owned treatment works (POTW) as defined in ARM Title 17, chapter 30, subchapter 13;
- (h) "new permit" means a permit for a facility or activity that does not have an effective permit;
- (i) "non-traditional MS4" means a system similar to separate storm sewer systems in municipalities, such as systems at military bases, large educational, hospital, or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings;
- (j) "other wastes," as provided in 75-5-103, MCA, means garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, sand, ashes, offal, night soil, oil, grease, tar, heat, chemicals, dead animals, sediment, wrecked or discarded equipment, radioactive materials, solid waste, and all other substances that may pollute state waters;
- (k) "outfall" means a disposal system through which effluent or waste leaves the facility or site;
- (l) "pesticide" means:
  - (i) a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest;
  - (ii) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; and
  - (iii) any nitrogen stabilizer, except that the term "pesticide" shall not include any article that is a "new animal drug" within the meaning of section 201(w) of the federal Food, Drug, and Cosmetic Act, 21 U.S.C. 321(w), that has been determined by the United States Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of section 201(x) of 21 U.S.C. 321(x) bearing or containing a new animal drug. The term "pesticide" does not include liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on such products) for use on a critical or semi-critical device, as defined in section 201 of the federal Food, Drug, and Cosmetic Act, 21 U.S.C. 321. For purposes of the preceding sentence, the term "critical device" includes any device that is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, and the term "semi-critical device" includes any device that contacts intact mucous membranes but that does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body.
- (m) "renewal permit" means a permit for an existing facility that has an effective discharge permit;
- (n) "single county," for pesticide permit fee purposes, means the general permit authorizing pesticide application within one county; and
- (o) "threshold," for pesticide permit fee purposes, means the area of surface water that is impacted annually by pesticide treatment, as designated in the Pesticide General Permit for specific pattern uses.



(3) A person who applies for a permit, certificate, license, notice of intent, plan review, waiver, determination of significance, or other authorization required by rule under 75-5-201, 75-5-301, or 75-5-401, MCA, or for a modification or renewal of any of these authorizations, shall pay to the department an application fee as determined under (6).

(4) A person whose activity requires an application to degrade state waters under 75-5-303, MCA, and ARM Title 17, chapter 30, subchapter 7 shall submit a degradation authorization fee with the application, as determined under (7).

(5) A person who holds a permit, certificate, license, or other authorization required by rule under 75-5-201 or 75-5-401, MCA, shall pay to the department an annual permit fee as determined under (8).

(6) The fee schedules for new or renewal applications for, or modifications of, a Montana pollutant discharge elimination system permit under ARM Title 17, chapter 30, subchapter 11 or 13, a Montana ground water pollution control system permit under ARM Title 17, chapter 30, subchapter 10, or any other authorization under 75-5-201, 75-5-301, or 75-5-401, MCA, or rules promulgated under these authorities, are set forth below as Schedules I.A, I.B, I.C, and I.D. Fees must be paid in full at the time of submission of the application. For new applications under Schedule I.A, the annual fee from Schedule III.A for the first year must also be paid at the time of application. For new applications under Schedule I.B and I.C, the annual fee is included in the new permit amount and covers the annual fee for the calendar year in which the permit coverage becomes effective.

(a) Under Schedules I.A and I.B, the department shall assess a fee for each outfall, except that MS4 permit fees under Schedule I.A are based on population as provided in (6)(h). An application fee for multiple outfalls is not required if there are multiple outfalls from the same source that have similar effluent characteristics, unless the discharges are to different receiving waters or stream segments, or result in multiple or variable (flow dependent) effluent limits or monitoring requirements.

(b) For purposes of (6) and (7), if a resubmitted application contains substantial changes or deficiencies requiring significant additional review, the department shall require an application resubmittal fee under Schedule I.D. The resubmittal fee must be paid before any further review is conducted. The department shall give written notice of the assessment within 30 days after receipt of the resubmittal and provide for appeal as specified in (11). If the department does not receive a response to a deficiency notice within one year, the applicant shall submit a new application and associated fees in order for application processing to continue.

(c) The department may assess an administrative processing fee under Schedule I.D when a permittee makes substantial alterations or additions, requiring significant additional review, to a sediment control plan, waste management plan, nutrient management plan, pesticide management plan, or storm water pollution prevention plan.



(d) Application fees are nonrefundable except, as required by 75-5-516(1)(d), MCA, if the permit or authorization is not issued the department shall return a portion of the application fee based on avoided enforcement costs. The department shall return 25% of the application fee if the application is withdrawn or if the department waives federal Clean Water Act section 401 certification within 30 days after submittal.

(e) Facilities with an expired permit must pay the new permit application fee for individual permit coverage as specified in Schedule I.A.

(f) Applications for new permits or permit renewals for sources that constitute a new or increased source, as defined in ARM 17.30.702(4817), must pay a significance determination fee for each outfall in addition to the application fee.

(g) Discharges composed entirely of storm water from industrial activities or from mining and oil and gas activities, as defined in ARM 17.30.1105, may be incorporated into a permit application submitted under Schedule I.A. The application fee for each storm water outfall must be submitted to the department with the application.

(h) The application fee for an individual permit for a municipal separate storm sewer system (MS4) is determined by population based on the latest decennial census from the United States Census Bureau. Applications for MS4 permits with co-permittees will receive a 10% reduction in the application fee.

#### Schedule I.A Application Fee for Individual Permits

Category	Renewal Fee	New Permit Fee
Publicly owned treatment works - major permit	\$ 4,800	\$ 5,000
Privately owned treatment works - major permit	5,000	5,000
Publicly owned treatment works - minor permit	1,500	2,500
Privately owned treatment works - minor permit	3,000	4,200
Ground water permit, domestic wastes flow rate - gallons per day		
0-10,000 gpd	1,200	2,500
10,001 to 30,000 gpd	1,500	2,500
more than 30,000 gpd	2,500	4,000
Ground water permit, industrial, or other wastes		
0-1,000 gpd	1,000	1,500
1,001 to 5,000 gpd	1,500	2,500
5,001 to 10,000 gpd	2,500	3,500
more than 10,000 gpd	4,800	5,000
Concentrated animal feeding operation permit	600	600



## WATER QUALITY

17.30.201

Storm water permit construction, industrial, and mining, oil, and gas activities	2,000	3,200
Traditional storm water municipal separate storm sewer system (MS4) permit		
population greater than 50,000	9,000	11,000
population 10,000 to 50,000	7,000	9,000
population less than 10,000	6,000	8,000
Non-traditional MS4 permit	5,000	7,000
Other MS4 permits	4,000	5,000
Significance determination	4,000	5,000
Storm water outfall - (integrated)	1,000	1,500

## Schedule I.B Application Fee for Non-Storm Water General Permits

Category	Renewal Fee	New Permit Fee (includes initial annual fee)
Concentrated animal feeding operation	\$ 600	\$ 1,200
Construction dewatering	400	900
Fish farms	600	1,200
Produced water	900	1,200
Suction dredge		
resident of Montana	25	50
nonresident of Montana	100	200
Sand and gravel	900	1,200
Domestic sewage treatment lagoon	800	1,200
Disinfected water	800	1,200
Petroleum cleanup	800	1,200
Pesticides		
single county - less than threshold	25	50
multi-county - less than threshold	50	100
single county - greater than threshold	250	500
multi-county - greater than threshold	600	1,200
Ground water remediation or dewatering	800	1,400
Ground water potable water treatment facilities	800	1,400
Other general permit, not listed above	600	1,200



(i) Application fees in Schedule I.C for authorizations under the general permit for storm water associated with construction activities are based on the total acreage of disturbed land. Renewal application fees will not be required during the general permit renewal cycle, unless the authorization has been in effect for more than four years.

(j) Application fees in Schedule I.C for authorizations under the general permits for storm water associated with industrial activities and mining, oil, and gas activities are based on the total size of the regulated facility or activity in acres.

(k) Application fees in Schedule I.C for authorizations under a general permit for a municipal separate storm sewer system (MS4) are determined by population based on the latest decennial census from the United States Census Bureau. Applications for MS4 permit coverage with co-permittees will receive a 10% reduction in the application fee.

(l) Modifications to authorizations under the general permit for storm water associated with construction activities will be processed under Schedule I.D as a minor modification if the modification is submitted within six months after the date of issuance of the authorization. Modifications, except for name changes, submitted six months or more after issuance of the authorization will be processed under Schedule I.C as a new permit application.

(m) Modifications, except for name changes, to authorizations under a general permit other than the general permit for storm water associated with construction activities must be processed under Schedule 1.B and I.C as a renewed application.

(n) A facility with a construction storm water no-exposure certification from the department must apply for and receive a new certification every five years in order to maintain a no-exposure status.

#### Schedule I.C Application Fee for Storm Water General Permits

Category	Renewal Amount	New Permit Amount (includes initial annual fee)
Storm water associated with construction		
1 to 5 acres	\$ 900	\$ 900
more than 5 acres, up to 10 acres	1,000	1,000
more than 10 acres, up to 25 acres	1,200	1,200
more than 25 acres, up to 100 acres	2,000	2,000
more than 100 acres	3,500	3,500
Storm water associated with industrial activities		
small - 5 acres or less	1,200	1,500
medium - more than 5 acres, up to 20 acres	1,500	1,800
large - more than 20 acres	1,800	2,000



## WATER QUALITY

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Storm water associated with mining, oil, and gas		
small - 5 acres or less	1,200	1,500
medium - more than 5 acres, up to 20 acres	1,500	1,800
large - more than 20 acres	1,800	2,000
Traditional storm water municipal separate storm sewer system (MS4)		
population greater than 50,000	7,000	10,000
population 10,000 to 50,000	6,000	8,000
population less than 10,000	5,000	6,000
County MS4 permit	4,000	5,000
Non-traditional MS4 permit	2,000	3,000
Storm water no-exposure certification required once every five years	300	500
Storm water construction waiver		400

(o) The minimum application fee under Schedule I.D for federal Clean Water Act section 401 certification is \$400 or 1% of the gross value of the proposed project, whichever is greater, and the maximum fee may not exceed \$20,000. If a fee is submitted for a 401 certification and the department waives certification, without review, because the project will require a department permit or authorization identified in ARM 17.30.105(2)(b), the department will credit the fee towards the cost of the applicable permit or authorization.

## Schedule I.D Application Fee for Other Activities

Category	Amount
Short-term water quality standard, turbidity "318 authorization"	\$ 250
Short-term water quality standard, remedial activities and pesticide application "308 authorization"	250
Federal Clean Water Act section 401 certification	See ARM 17.30.201(6)(o)
Review plans and specifications to determine if permit is necessary, pursuant to 75-5-402(2), MCA	2,000
Major modification	Renewal fee from Schedule I.A
Minor modification, includes transfer of ownership	500
Resubmitted application fee	500
Administrative processing fee	500



(7) The fee schedule for new or renewal authorizations to degrade state waters under ARM Title 17, chapter 30, subchapter 7 is set forth in Schedule II. Payment of the degradation authorization fee is due upon submittal of the applications. For the domestic sewage treatment and industrial activity categories, the department shall assess a fee for each outfall. If an application for authorization to degrade state waters is denied, the department shall return 15% of the fee submitted.

#### Schedule II Review of Authorizations to Degrade

Category	Amount
Domestic sewage treatment	\$5,000
Industrial activity	5,000

(8) The annual permit fees are set forth in Schedules III.A, III.B, and III.C. No annual fee is required for activities listed in Schedule I.D.

(a) Under Schedules III.A and III.B, the department shall assess a fee for each outfall, except that MS4 permit fees under Schedule III.A are based on population as determined by the latest decennial census from the United States Census Bureau. An annual fee for multiple outfalls is not required if there are multiple outfalls from the same source that have similar effluent characteristics, unless the discharges are to different receiving waters or stream segments, or the discharges result in multiple or variable (flow dependent) effluent limits or monitoring requirements. For ground water permits, the department shall assess a fee based on the annual average daily flow in gallons per day for each outfall.

#### Schedule III.A Annual Fee for Individual Permits

Category	Minimum Fee	Fee Per Million Gallons of Effluent per Day (MGD)
Publicly owned treatment works - major permit	\$ 3,000	\$ 3,000
Privately owned treatment works - major permit	3,000	3,000
Publicly owned treatment works - minor permit	1,500	3,000
Privately owned treatment works - minor permit	1,500	3,000
discharge of non-contact cooling water only	800	800



**REASON:** The amendment to 17.30.201(6)(f) brings the definition number of “new or increased source” in line with the changes occurring to subchapter 7 due to the adoption of base numeric nutrient standards.



## Subchapter 5

## Mixing Zones in Surface and Ground Water

17.30.501 PURPOSE (1) The purpose of this subchapter is to implement 75-5-301(4), MCA, which requires the board to adopt rules governing the granting of mixing zones consistent with the provisions of 75-5-302 through 75-5-307 and 80-15-201, MCA. (History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.502 DEFINITIONS The following definitions, in addition to those in 75-5-103, MCA, and ARM Title 17, chapter 30, subchapters 6 and 7, apply throughout this subchapter:

(1) "Acute toxicity" means a condition in which ambient water concentrations exceed the applicable acute aquatic life standards given in department Circular DEQ-7.

(2) "Chronic toxicity" means a condition in which ambient water concentrations exceed the applicable chronic aquatic life standards given in department Circular DEQ-7.

(3) "Constructed wetland" means a wetland intentionally designed, constructed and operated for the primary purpose of wastewater or stormwater treatment or environmental remediation.

(4) "Currently available data" means data that is readily available to the department at the time a decision is made. It does not mean new data to be obtained as a result of departmental efforts or required of the applicant.

(5) "Human health standard" means the parameters listed as human health standards in department Circular DEQ-7.

(6) "Mixing zone" is defined in 75-5-103, MCA, and also means a limited area of a surface water body or a portion of an aquifer, where initial dilution of a discharge takes place and where water quality changes may occur and where certain water quality standards may be exceeded.

(7) "Nearly instantaneous mixing zone" means an area where dilution of a discharge to water by the receiving water occurs at a nearly instantaneous rate, with the result that its boundaries are either at the point of discharge or are within two stream widths downstream of the point of discharge.

(8) "Narrative standards" means those parameters listed as narrative standards in department Circular DEQ-7.

(9) "Numeric acute standards" means the parameters listed as acute aquatic life standards in department Circular DEQ-7.



(10) "Numeric chronic standards" means the parameters listed as chronic aquatic life standards in department Circular DEQ-7.

(11) "Standard mixing zone" means a mixing zone that meets the requirements of ARM 17.30.516 and 17.30.517 and involves less data collection and demonstration than required for a source specific mixing zone.

(12) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

(13) "Zone of influence" means the area under which a well can be expected to remove water.

(14) The board adopts and incorporates by reference Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (October 2012 edition), which establishes water quality standards for toxic, carcinogenic, bioconcentrating, nutrient, radioactive, and harmful parameters, and also establishes human health-based water quality standards for the following specific nutrients with toxic effects: nitrate, nitrate + nitrite, and nitrite. Copies of Department Circular DEQ-7 are available from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

(15) Except as provided for in (16), the board adopts and incorporates by reference Department Circular DEQ-12, entitled "Montana Base Numeric Nutrient Standards and Nutrient Standards Variances," Part A (December 2013 edition) which establishes numeric water quality standards for total nitrogen and total phosphorus in surface waters, and Part B (December 2013 edition) which establishes variances from the numeric water quality standards for total nitrogen and total phosphorus in surface waters adopted by the board in Part A. Copies of Department Circular DEQ-12 are available from the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901.

(16) If a court of competent jurisdiction declares section 75-5-313 or any portion of that statute invalid, or if the United States environmental protection agency disapproves section 75-5-313 or any portion of that statute under 30 C.F.R. 131.21, then subsection (15) is void, and the narrative water quality standards contained in 17.30.637 are the standards for total nitrogen and total phosphorus in surface water (except for the Clark Fork River, for which the standards are the numeric standards in 17.30.631).

(History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; AMD, 1995 MAR p. 1798, Eff. 9/15/95; AMD, 1996 MAR p. 555, Eff. 2/23/96; TRANS, from DHES, 1996 MAR p. 1499; AMD, 1998 MAR p. 2487, Eff. 9/11/98; AMD, 2002 MAR p. 387, Eff. 2/15/02; AMD, 2003 MAR p. 217, Eff. 2/14/03; AMD, 2004 MAR p. 725, Eff. 4/9/04; AMD, 2006 MAR p. 528, Eff. 2/24/06; AMD, 2008 MAR p. 946, Eff. 5/9/08; AMD, 2010 MAR p. 1796, Eff. 8/13/10; AMD, 2012 MAR p. 2060, Eff. 10/12/12.)

Rules 17.30.503 and 17.30.504 reserved

(g) Aquifer characteristics: when currently available data indicate that the movement of ground water or pollutants within the subsurface cannot be accurately



predicted, such as the movement of ground water through fractures, and also indicate that this unpredictability might result in adverse impacts due to a particular concentration of a parameter in the mixing zone, it may be appropriate to deny the mixing zone for the parameter of concern.

(h) Ground water discharges to surface water: In the case of a discharge to ground water which in turn discharges to surface water within a reasonably short time or distance, the mixing zone may extend into the surface water, and the same considerations which apply to setting mixing zones for direct discharges to surface water will apply in determining the allowability and extent of the mixing zone in the surface water.

(i) Discharges to intermittent and ephemeral streams: the "natural condition" of these waters during periods of no flow will be the average quality that occurs during periods when flow is present. If a proposed discharge occurs when there is no flow, the quality of the discharge must be at or better than this quality. If variations in seasonal stream flow are known and a mixing zone is limited to use during periods when dilution is available, such a mixing zone may be allowed by the department. (History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.507 SPECIFIC RESTRICTIONS FOR SURFACE WATER MIXING ZONES (1) Mixing zones for surface waters are to comply with the following water quality standards:

(a) narrative water quality standards, standards for harmful substances, numeric acute and chronic standards for aquatic life, standards in Circular DEQ-12 Part A unless a nutrient standards variance from the base numeric nutrient standards has been granted pursuant to DEQ-12 Part B, and standards based on human health must not be exceeded beyond the boundaries of the surface water mixing zone;

(b) acute standards for aquatic life for any parameter may not be exceeded in any portion of a mixing zone, unless the department specifically finds that allowing minimal initial dilution will not threaten or impair existing beneficial uses.

(2) Discharges to wetlands (other than constructed wetlands) will not be granted a mixing zone for parameters for which the state has adopted numeric acute or chronic standards for aquatic life or for human health in the surface water quality standards, unless the following can be demonstrated to the satisfaction of the department:

(a) the standards referenced in (1) will not be exceeded beyond the boundaries of the mixing zone;

(b) existing beneficial uses will not be threatened or harmed; and

(c) the conditions in 75-5-303(3), MCA, are met.



(3) For discharges to surface water that first pass through the ground, such as discharges from infiltration systems or land application areas, the surface water mixing zone begins at the most upstream point of discharge into the receiving surface water. If the discharge continues to occur downstream beyond a distance equal to 10 times the stream width measured at the upstream discharge point at low flow, a standard mixing zone will not be granted. (History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.508 SPECIFIC RESTRICTIONS FOR GROUND WATER MIXING ZONES (1) Mixing zones for ground water are to be limited and comply with the following water quality standards:

(a) Human health based ground water standards must not be exceeded beyond the boundaries of the mixing zone.

(2) No mixing zone for ground water will be allowed if the zone of influence of an existing drinking water supply well will intercept the mixing zone. (History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

Rules 17.30.509 through 17.30.514 reserved

## WATER QUALITY

## 17.30.516

17.30.515 DEPARTMENT PROCEDURES (1) The department will determine whether a mixing zone is appropriate for a particular discharge during the department's permit, permit renewal, approval, order, or authorization review process pursuant to the rules in this subchapter. The department may determine that:

(a) no mixing zone shall be granted;  
(b) the standard mixing zone applied for is appropriate;  
(c) the source specific mixing zone applied for is appropriate; or  
(d) an alternative or modified mixing zone, as defined by the department, is appropriate.

(2) A person applying to the department for a mixing zone must indicate the type of mixing zone applied for and supply sufficient detail for the department to make a determination regarding the authorization of the mixing zone under the rules of this subchapter.

(3) A source specific mixing zone may not be used unless approved by the department.

(4) In making a determination of nonsignificance under the rules in ARM Title 17, chapter 30, subchapter 7, a person may use a standard mixing zone without approval from the department or request that the department specifically designate a mixing zone, which may be either a standard or source specific mixing zone.

(5) Department determinations regarding mixing zones will be accomplished within the time frames required for the underlying permit, approval, or authorization, and the applicant will be notified of that determination according to those same requirements. In all other cases, department determinations will be made and the applicant notified within 30 days after receipt of a complete application.

(6) After receiving notification of the department's determination the applicant



may:

- (a) accept the department's determination;
- (b) modify the proposed mixing zone and reapply; or
- (c) appeal the department's decision pursuant to any applicable provision of law. (History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499.)

17.30.516 STANDARD MIXING ZONES FOR SURFACE WATER (1) If a discharge to surface water is small in comparison to the volume of the receiving water or if the mixing is nearly instantaneous and the parameter(s) of concern will not threaten or impair existing uses as determined under ARM 17.30.506, a standard mixing zone may be used.

(2) A standard surface water mixing zone will not be granted for a new or increased discharge to a lake or wetland.

(3) Facilities that meet the terms and conditions in (a) through (de) qualify for a standard mixing zone as follows:

## ADMINISTRATIVE RULES OF MONTANA

3/31/06

17-2671

### 17.30.516

### ENVIRONMENTAL QUALITY

(a) Facilities that discharge a mean annual flow of less than one million gallons per day (MGD) to a stream segment with a dilution ratio greater than or equal to 100:1. For purposes of this procedure, the stream dilution ratio is defined as the seven-day, 10-year (7Q10) low flow of the stream segment without the discharge, divided by the mean annual flow of the discharge. In this case discharge limitations will be based on dilution with the 7Q10.

(b) Facilities that discharge a mean annual flow less than one MGD to a stream segment with a dilution less than 100:1. In cases where dilution is less than 100:1, discharge limitations will be based on dilution with 25% of the 7Q10.

(c) Facilities that discharge to surface waters through the ground may qualify for a standard surface water mixing zone.

(d) Facilities whose discharge results in a nearly instantaneous mixing zone. Discharge limitations shall be based on dilution with the seven-day, 10-year low flow of the receiving water except as limited by consideration of the factors listed in ARM 17.30.506. For surface waters, nearly instantaneous mixing will be assumed when there is an effluent diffuser which extends across the entire stream width (at low flow), or when the mean daily flow of the discharge exceeds the seven-day, 10-year low flow of the receiving water. A discharge may also be considered nearly instantaneous if the discharger so demonstrates in accordance with a study plan approved by the department. For the purposes of this demonstration nearly instantaneous mixing will be assumed when there will be not more than a 10% difference in bank-to-bank concentrations at a downstream distance less than two stream/river widths.

(e) Facilities that discharge to surface water the parameters found in DEQ-12 Part A. Discharge limitations shall be based on dilution with the entire seasonal 14-



day, 5-year (seasonal 14Q5) low flow of the receiving water without the discharge.

(4) The length of a standard mixing zone for flowing surface water, other than a nearly instantaneous mixing zone, must not extend downstream more than the one-half mixing width distance or extend downstream more than 10 times the stream width, whichever is more restrictive. For purposes of making this determination, the stream width as well as the discharge limitations are considered at the 7Q10 or seasonal 14Q5 low flow. The seasonal 14Q5 low flow is to be used only in conjunction with base numeric nutrient standards in DEQ-12 Part A. The recommended calculation to be used to determine the one-half mixing width distance downstream from a stream bank discharge is described below.

(a)  $A_{1/2} = [0.4(W/2)^2V]/L$ , where:

(i)  $A_{1/2}$  = one-half mixing width distance;

(ii)  $W$  = width in feet at the 7Q10 or seasonal 14Q5;

(iii)  $V$  = velocity of the stream at the 7Q10 or seasonal 14Q5 downstream of the discharge (in ft/second);

(iv)  $L$  = lateral dispersion coefficient for the 7Q10 or seasonal 14Q5 downstream of the discharge (in ft<sup>2</sup>/second), where:

(b)  $L = CDU$ , where:

(i)  $C$  = channel irregularity factor immediately downstream of the discharge, where:

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(A)  $C = 0.1$  for straight, rectangular streams;

(B)  $C = 0.3$  for channelized streams;

(C)  $C = 0.6$  for natural channels with moderate meandering;

(D)  $C = 1.0$  for streams with significant meandering; and

(E)  $C = 1.3$  for streams with sharp 90° or more bends;

(ii)  $D$  = average water depth at the 7Q10 or seasonal 14Q5 downstream of the discharge (in feet);

(iii)  $U$  = shear velocity (in ft/sec), where:

(c)  $U = (32.2DS)^{1/2}$ , where:

(i) 32.2 is the acceleration due to gravity (32.2 ft/sec<sup>2</sup>);

(ii)  $D$  = average water depth at the 7Q10 or seasonal 14Q5 downstream of the discharge (in feet); and

(iii)  $S$  = slope of the channel downstream of the discharge (feet/feet).

(5) Monitoring may be required at the downgradient boundary of a surface water mixing zone only when there is a site-specific, impact-related reason to require such monitoring.

(6) A standard surface water mixing zone may be modified by the department on a case-by-case basis depending upon existing uses, flow regime, and the configuration of the stream channel. Where currently available data indicates that

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modifying a standard mixing zone would threaten or impair existing beneficial uses under ARM 17.30.506, the facility will not qualify for this modification procedure. (History: 75-5-301, MCA; IMP, 75-5-301, MCA; NEW, 1994 MAR p. 2136, Eff. 8/12/94; TRANS, from DHES, 1996 MAR p. 1499; AMD, 2006 MAR p. 528, Eff. 2/24/06.)

17.30.517 STANDARD MIXING ZONES FOR GROUND WATER (1) The following criteria apply to determine which discharges qualify for a standard ground water mixing zone:

(a) A standard ground water mixing zone is generally applicable in unconfined aquifers, but may not be appropriate for semi-confined or confined aquifers or in aquifers where ground water moves through fractures.

(b) Disposal systems that discharge to ground water through infiltration, drainfields, injection through a disposal well, leakage from an impoundment, seepage from a land application area, or other methods may qualify for a standard mixing zone.

(c) To determine if the discharge qualifies for a standard ground water mixing zone, the person proposing the discharge must estimate the anticipated concentration of pollutants at the downgradient boundary of the mixing zone (aquatic life standards do not apply in ground water). If the estimated concentration meets the nonsignificance criteria at the boundary of the mixing zone, as specified in ARM Title 17, chapter 30, subchapter 7, the discharge qualifies for a standard mixing zone.

**REASON:** New circular DEQ-12, which contains base numeric nutrient standards and variances from those standards, is incorporated into the mixing zone rules. The manner in which nutrients affect and impact beneficial uses in streams and rivers is different from toxic and harmful compounds found in DEQ-7 and it was necessary to develop an appropriate low-flow design flow (the seasonal 14Q5) specifically for permitting nutrient discharges. Derivation of the seasonal 14Q5 is discussed in the proposed changes to 17.30.635. Here, the rule changes incorporate the seasonal 14Q5 flow into the calculations used to determine the length of a standard mixing zone. 17.30.516 has been amended to provide that the full volume of a seasonal 14Q5 (as opposed to some fraction of it) is to be used for dilution calculations for nutrients in DEQ-12 Part A. This allowance reflects the non-toxic nature of nutrients at the concentrations found in DEQ-12 Part A.